What is claimed is:

1. An alkaline developing solution for development of a heat-sensitive presensitized plate of positive-working mode for use in making a lithographic printing plate, which developing solution comprises a linear-type alkyleneoxide adduct and a branched-type alkyleneoxide adduct.

2. The alkaline developing solution according to claim 1 wherein the linear-type alkyleneoxide adduct is selected from the compounds represented by the following general formula (I):

R-O-(A)m-(B)n-H (I)

wherein R represents a hydrogen atom, an alkyl or alkenyl group having carbon atoms of from 1 to 30, or an aryl group having carbon atoms of from 6 to 48, A and B each represents $-CH_2CH_2O-$ or $-CH_2CH(CH_3)O-$ provided that A and B are different from each other, and m and n each represents 0 or an integer of from 1 to 50 provided that m and n are not zero at the same time.

3. The alkaline developing solution according to claim 1 wherein the linear-type alkyleneoxide adduct is selected from the group consisting of compounds represented by the following formula ①, ②, ③, ④, ⑤ or ⑥:

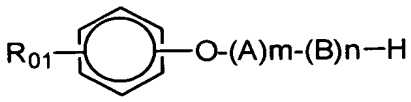
① HO-(A)m-(B)n-H (wherein A and B each represents $-CH_2CH_2O-$ or $-CH_2CH(CH_3)O-$ provided that A and B are different from each other, and m and n each represents 0 or an integer of from 1 to 50 provided that m and n are not zero at the same time.)

② C_pH_{2p+1}-O-(A)m-(B)n-H (wherein A and B each represents $-CH_2CH_2O-$ or $-CH_2CH(CH_3)O-$ provided that A and B are different from each other, and m and n each represents 0 or an integer of from 1 to 50 provided that m and n are not zero at the same time, and p is an integer of from 1 to 30.)

③ C_qH_{2q-1}-O-(A)m-(B)n-H (wherein A and B each represents $-CH_2CH_2O-$ or -

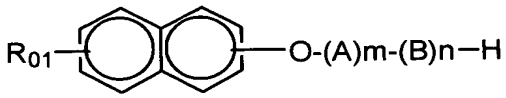
$CH_2CH(CH_3)O$- provided that A and B are different from each other, and m and n each represents 0 or an integer of from 1 to 50 provided that m and n are not zero at the same time, and q is an integer of from 2 to 30.)

④



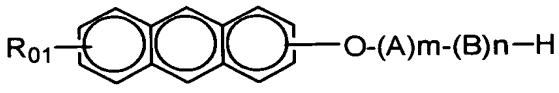
(wherein R_{01} represents a hydrogen atom or an alkyl group having carbon atoms of from 1 to 20 which may be in the form of linear or branched chain, A and B each represents $-CH_2CH_2O-$ or $-CH_2CH(CH_3)O-$ provided that A and B are different from each other, and m and n each represents 0 or an integer of from 1 to 50 provided that m and n are not zero at the same time.)

⑤



(wherein R_{01} represents a hydrogen atom or an alkyl group having carbon atoms of from 1 to 20 which may be in the form of linear or branched chain, A and B each represents $-CH_2CH_2O-$ or $-CH_2CH(CH_3)O-$ provided that A and B are different from each other, and m and n each represents 0 or an integer of from 1 to 50 provided that m and n are not zero at the same time.)

⑥



(wherein R_{01} represents a hydrogen atom or an alkyl group having carbon atoms of from 1 to 20 which may be in the form of linear or branched chain, A and B each represents $-CH_2CH_2O-$ or $-CH_2CH(CH_3)O-$ provided that A and B are different from each other, and m and n each represents 0 or an integer of

from 1 to 50 provided that m and n are not zero at the same time.).

4. The alkaline developing solution of claim 1 wherein the branched-type alkyleneoxide adduct is selected from the compound having in the molecular structure thereof at least two groups represented by the following formula (II): -(A)m-(B)n-H (II)

wherein A and B each represents $-CH_2CH_2O-$ or $-CH_2CH(CH_3)O-$ provided that A and B are different from each other, and m and n each represents 0 or an integer of from 1 to 50 provided that m and n are not zero at the same time.

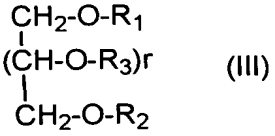
5. The alkaline developing solution of claim 1 wherein the branched-type alkyleneoxide adduct is selected from the group consisting of

compound (1) having in the molecular structure thereof at least two of the group: -O-(A)m-(B)n-H (wherein A and B each represents $-CH_2CH_2O-$ or $-CH_2CH(CH_3)O-$ provided that A and B are different from each other, and m and n each represents 0 or an integer of from 1 to 50 provided that m and n are not zero at the same time.), and

compound (2) having in the molecular structure thereof a nitrogen atom and at least two of the group: -(A)m-(B)n-H (wherein A and B each represents $-CH_2CH_2O-$ or $-CH_2CH(CH_3)O-$ provided that A and B are different from each other, and m and n each represents 0 or an integer of from 1 to 50 provided that m and n are not zero at the same time.), said group being attached to the nitrogen atom.

6. The alkaline developing solution of claim 1 wherein the branched-type alkyleneoxide adduct is selected from the group consisting of compounds represented by the following formula (III), compounds represented by the

following formula (IV), compounds represented by the following formula (IV'), alkyleneoxide adduct of polyglycerin, and trimethylolpropyl ether alkyleneoxide adducts:

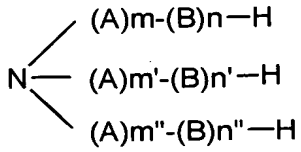


(III)

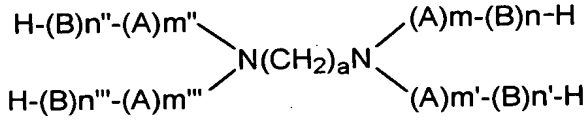
wherein r represents an integer of from 1 to 10, and R_1, R_2 and R_3 each represent a hydrogen atom or the following formula (II):

-(A)m-(B)n-H (II)

wherein A and B each represents $-CH_2CH_2O-$ or $-CH_2CH(CH_3)O-$ provided that A and B are different from each other, and m and n each represents 0 or an integer of from 1 to 50 provided that m and n are not zero at the same time, provided that at least two of R_1, R_2 and R_3 represent the group represented by the formula (II),



(IV)



(IV')

wherein A and B each represents $-CH_2CH_2O-$ or $-CH_2CH(CH_3)O-$ provided that A and B are different from each other, and m and n each represents 0 or an integer of from 1 to 50 provided that m and n are not zero at the same time, m' and n' each represents 0 or an integer of from 1 to 50 provided that

m' and n' are not zero at the same time, m" and n" each represents 0 or an integer of from 1 to 50 provided that m" and n" are not zero at the same time, and m"' and n"' each represents 0 or an integer of from 1 to 50 provided that m"' and n"' are not zero at the same time, and "a" in the formula (IV') is an integer of from 2 to 12.

7. The alkaline developing solution according to claim 1 which further comprises at least one selected from the group consisting of anionic surfactants and amphoteric surfactants.

8. The alkaline developing solution of claim 7 wherein the anionic surfactant is selected from the group consisting of fatty alcohol sulfuric ester salts, higher alkyl ether sulfate salts, aryl ether sulfate salts, alkyl aryl sulfonate, aliphatic alcohol phosphoric ester salts, alkyl amide sulfonate salts, sulfonate salts of bibasic aliphatic ester, hydroxyalkane sulfonate salts, alkane sulfonate salts, alkyl diphenylether sulfonate salts, diphenylether disulfonate salts, dialkyl sulfosuccinate salts, olefin sulfonate salts, linear alkyl benzene sulfonate salts, branched alkyl benzene sulfonate salts, alkyl naphthalene sulfonate salts, alkyl phenoxy polyoxyethylene propyl sufonate salts, polyoxyethylene alkyl sulfophenylether salts, disodium N-alkyl sulfosuccinate monoamide and petroleum sulfonates.

9. The alkaline developing solution of claim 7 wherein the amphoteric surfactant is selected from the group consisting of amino acid-type amphoteric surfactants and betaine-type amphoteric surfactants.

10. A method for preparing a lithographic printing plate comprising the steps of light-exposing to infrared radiation, a heat-sensitive presensitized

plate of positive-working mode for use in making a lithographic printing plate, said presensitized plate having an image recording layer which comprises an IR-absorbing dye on a substrate, and developing the light-exposed plate with an alkaline developing solution which comprises a linear-type alkyleneoxide adduct and a branched-type alkyleneoxide adduct.

11. The method of claim 10 wherein the the linear-type alkyleneoxide adduct is selected from the compounds represented by the following general formula (I):

R-O-(A)m-(B)n-H (I)

wherein R represents a hydrogen atom, an alkyl or alkenyl group having carbon atoms of from 1 to 30, or an aryl group having carbon atoms of from 6 to 48, A and B each represents $-CH_2CH_2O-$ or $-CH_2CH(CH_3)O-$ provided that A and B are different from each other, and m and n each represents 0 or an integer of from 1 to 50 provided that m and n are not zero at the same time.

12. The method of claim 10 wherein the linear-type alkyleneoxide adduct is selected from the group consisting of compounds represented by the following formula ①, ②, ③, ④, ⑤ or ⑥:

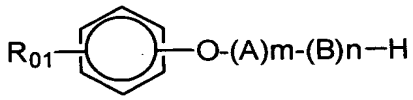
① HO-(A)m-(B)n-H (wherein A and B each represents $-CH_2CH_2O-$ or $-CH_2CH(CH_3)O-$ provided that A and B are different from each other, and m and n each represents 0 or an integer of from 1 to 50 provided that m and n are not zero at the same time.)

② C_pH_{2p+1}-O-(A)m-(B)n-H (wherein A and B each represents $-CH_2CH_2O-$ or $-CH_2CH(CH_3)O-$ provided that A and B are different from each other, and m and n each represents 0 or an integer of from 1 to 50 provided that m and n are not zero at the same time, and p is an integer of from 1 to 30.)

③ C_qH_{2q-1}-O-(A)m-(B)n-H (wherein A and B each represents $-CH_2CH_2O-$ or -

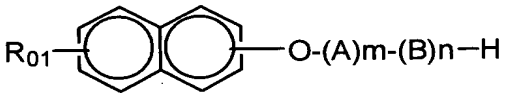
$CH_2CH(CH_3)O$- provided that A and B are different from each other, and m and n each represents 0 or an integer of from 1 to 50 provided that m and n are not zero at the same time, and q is an integer of from 2 to 30.)

④



(wherein R_{01} represents a hydrogen atom or an alkyl group having carbon atoms of from 1 to 20 which may be in the form of linear or branched chain, A and B each represents $-CH_2CH_2O-$ or $-CH_2CH(CH_3)O-$ provided that A and B are different from each other, and m and n each represents 0 or an integer of from 1 to 50 provided that m and n are not zero at the same time.)

⑤



(wherein R_{01} represents a hydrogen atom or an alkyl group having carbon atoms of from 1 to 20 which may be in the form of linear or branched chain, A and B each represents $-CH_2CH_2O-$ or $-CH_2CH(CH_3)O-$ provided that A and B are different from each other, and m and n each represents 0 or an integer of from 1 to 50 provided that m and n are not zero at the same time.)

⑥

(wherein R_{01} represents a hydrogen atom or an alkyl group having carbon atoms of from 1 to 20 which may be in the form of linear or branched chain, A and B each represents $-CH_2CH_2O-$ or $-CH_2CH(CH_3)O-$ provided that A and B are different from each other, and m and n each represents 0 or an integer of

from 1 to 50 provided that m and n are not zero at the same time.).

13. The method of claim 10 wherein the branched-type alkyleneoxide adduct is selected from the compound having in the molecular structure thereof at least two groups represented by the following formula (II):

-(A)m-(B)n-H (II)

wherein A and B each represents $-CH_2CH_2O-$ or $-CH_2CH(CH_3)O-$ provided that A and B are different from each other, and m and n each represents 0 or an integer of from 1 to 50 provided that m and n are not zero at the same time.

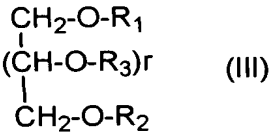
14. The method of claim 10 wherein the branched-type alkyleneoxide adduct is selected from the group consisting of

compound (1) having in the molecular structure thereof at least two of the group: -O-(A)m-(B)n-H (wherein A and B each represents $-CH_2CH_2O-$ or $-CH_2CH(CH_3)O-$ provided that A and B are different from each other, and m and n each represents 0 or an integer of from 1 to 50 provided that m and n are not zero at the same time.), and

compound (2) having in the molecular structure thereof a nitrogen atom and at least two of the group: -(A)m-(B)n-H (wherein A and B each represents $-CH_2CH_2O-$ or $-CH_2CH(CH_3)O-$ provided that A and B are different from each other, and m and n each represents 0 or an integer of from 1 to 50 provided that m and n are not zero at the same time.), said group being attached to the nitrogen atom.

15. The method of claim 10 wherein wherein the branched-type alkyleneoxide adduct is selected from the group consisting of compounds represented by the following formula (III), compounds represented by the

following formula (IV), compounds represented by the following formula (IV'), alkyleneoxide adduct of polyglycerin, and trimethylolpropyl ether alkyleneoxide adducts:

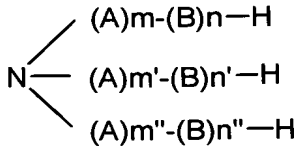


(III)

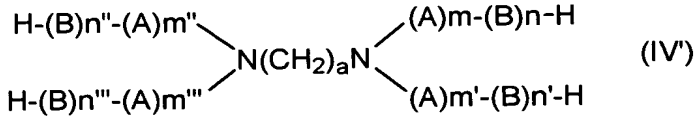
wherein r represents an integer of from 1 to 10, and R_1, R_2 and R_3 each represent hydrogen atom or the following formula (II):

-(A)m-(B)n-H (II)

wherein A and B each represents $-CH_2CH_2O-$ or $-CH_2CH(CH_3)O-$ provided that A and B are different from each other, and m and n each represents 0 or an integer of from 1 to 50 provided that m and n are not zero at the same time, provided that at least two of R_1, R_2 and R_3 represent the group represented by the formula (II),



(IV)



(IV')

wherein A and B each represents $-CH_2CH_2O-$ or $-CH_2CH(CH_3)O-$ provided that A and B are different from each other, and m and n each represents 0 or an integer of from 1 to 50 provided that m and n are not zero at the same time, m' and n' each represents 0 or an integer of from 1 to 50 provided that

m' and n' are not zero at the same time, m" and n" each represents 0 or an integer of from 1 to 50 provided that m" and n" are not zero at the same time, and m"' and n"' each represents 0 or an integer of from 1 to 50 provided that m"' and n"' are not zero at the same time, and "a" in the formula (IV') is an integer of from 2 to 12.

16. The method of claim 10 wherein the alkaline developing solution further comprises at least one selected from the group consisting of anionic surfactants and ampnoteric surfactants.

17. The method of claim 16 wherein the anionic surfactant is selected from the group consisting of fatty alcohol sulfuric ester salts, higher alkyl ether sulfate salts, aryl ether sulfate salts, alkyl aryl sulfonate, aliphatic alcohol phosphoric ester salts, alkyl amide sulfonate salts, sulfonate salts of bibasic aliphatic ester, hydroxyalkane sulfonate salts, alkane sulfonate salts, alkyl diphenylether sulfonate salts, diphenylether disulfonate salts, dialkyl sulfosuccinate salts, olefin sulfonate salts, linear alkyl benzene sulfonate salts, branched alkyl benzene sulfonate salts, alkyl naphthalene sulfonate salts, alkyl phenoxy polyoxyethylene propyl sufonate salts, polyoxyethylene alkyl sulfophenylether salts, disodium N-alkyl sulfosuccinate monoamide and petroleum sulfonates.

18. The method of claim 16 wherein the amphoteric surfactant is selected from the group consisting of amino acid-type amphoteric surfactants and betaine-type amphoteric surfactants.